

Notice of Allowability

Application No.

10/813,580

Examiner

Debra Wolfe

Applicant(s)

BRADLEY ET AL.

Art Unit

3725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Application filed March 30, 2004.
2. ☒ The allowed claim(s) is/are 1-19.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other


 DENNIS H. BANKS
 SUPERVISORY PATENT EXAMINER
 BIOLOGY CENTER 3701



EXAMINER'S AMENDMENT

The application has been amended as follows:

In the specification delete the following from page 1 lines 3-5

"CROSS-REFERENCE TO RELATED APPLICATIONS

This application is related to U.S. Patent Application Serial No. __/__, __ (Docket No. OSU 0019 PA), filed concurrently herewith".

NOTICE OF ALLOWABILITY

The following is an examiner's statement of reasons for allowance.

1. It is the opinion of the examiner that the art of record (considered as a whole) neither anticipates nor renders obvious "a profiled surface of said die portion, wherein said profiled surface of said die portion is configured to at least partially define said network of flow passages" in combination with the rest of the claimed limitations set forth in the independent claim.

2. Further searching by the examiner yielded additional prior art as follows:

Gafri et al (U.S. Patent 6,708,542 B1) discloses a method of electromagnetic forming of a metal plate using an electromagnetic actuator (forming coil assembly 84) that is opposite to a profiled die portion (mold 82) and is configured to generate a magnetic field upon activation through the discharge circuitry (88). A metal plate is placed between the electromagnetic actuator (forming coil assembly 84) and the die portion (mold (82), a current is discharged to coil (85) yielding a pulsed magnetic force which induces a very rapid movement in the plate thereby allowing the plate to deform against the die portion (mold 82) [See FIG 5A & 5B, Col. 5, lines 26-65].



Inoue (U.S. Patent # 3,365,522) discloses a method for magnetic forming of nonconductive materials by placing a nonconductive sheet of thermoplastic material (12) onto a die (10), placing an electrically conductive material (13) between the nonconductive sheet (12) and the electromagnetic actuator (coil 14, half-wave rectifier 15, and low-frequency source 16). Upon actuation of the electromagnetic actuator (coil 14, half-wave rectifier 15, and low-frequency source 16) eddy currents generated within the electrically conductive material causes the conductive layer (13) to obtain a sufficiently high temperature thus rendering the thermoplastic sheet (12) plastically deformable when a magnetic field is employed by a pulse causing the thermoplastic sheet (12) to take the shape of the profiled die portion (die cavity 11) [See Col. 3, lines 11-19].

Kusunoki et al (U.S. Patent # 6,938,449 B2) discloses a hydraulic forming device and process for forming a metal separator for a fuel cell. A metal separator is formed by first placing a metal plate body (11) onto the support section (21b) with the hydraulic fluid (A) filled to the edge portion of the lower die (21) within the hollow section (21a) [See FIG 1, Col. 8, lines 55-67], a blank holder (23) is then lowered toward the support section (21b) of the lower die (21) clamping the metal plate (11) [See FIG 2, Col. 9, lines 7-18], the upper die (22) is then lowered towards the hollow section (21 a) of the lower die (21) thus causing the hydraulic fluid to pressurize and form the rib-like structures on the metal plate (11) [See FIG 3&4, Col. 9 line 19 – Col. 10 line 29]

3. The above cited prior art fails to disclose a combination of an electromagnetic actuator and a profiled die portion configured to partially define a network of flow passages. Therefore, it




is concluded that claims 1, 18, and 19 of the present invention are allowable subject matter over the prior art. Claims 1-19 are allowed.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Debra Wolfe whose telephone number is (571) 272-1904. The examiner can normally be reached Monday - Thursday 6am - 3:30pm with alternating Fridays 6am - 2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached at (571) 272-4419. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


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SUPERVISORY PATENT EXAMINER
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Debra Wolfe
Examiner
Art Unit 3725